

# **Outcomes after concomitant aorta replacement with rapid deployment aortic valve replacement in aortic dilation (4.0-4.5cm)**

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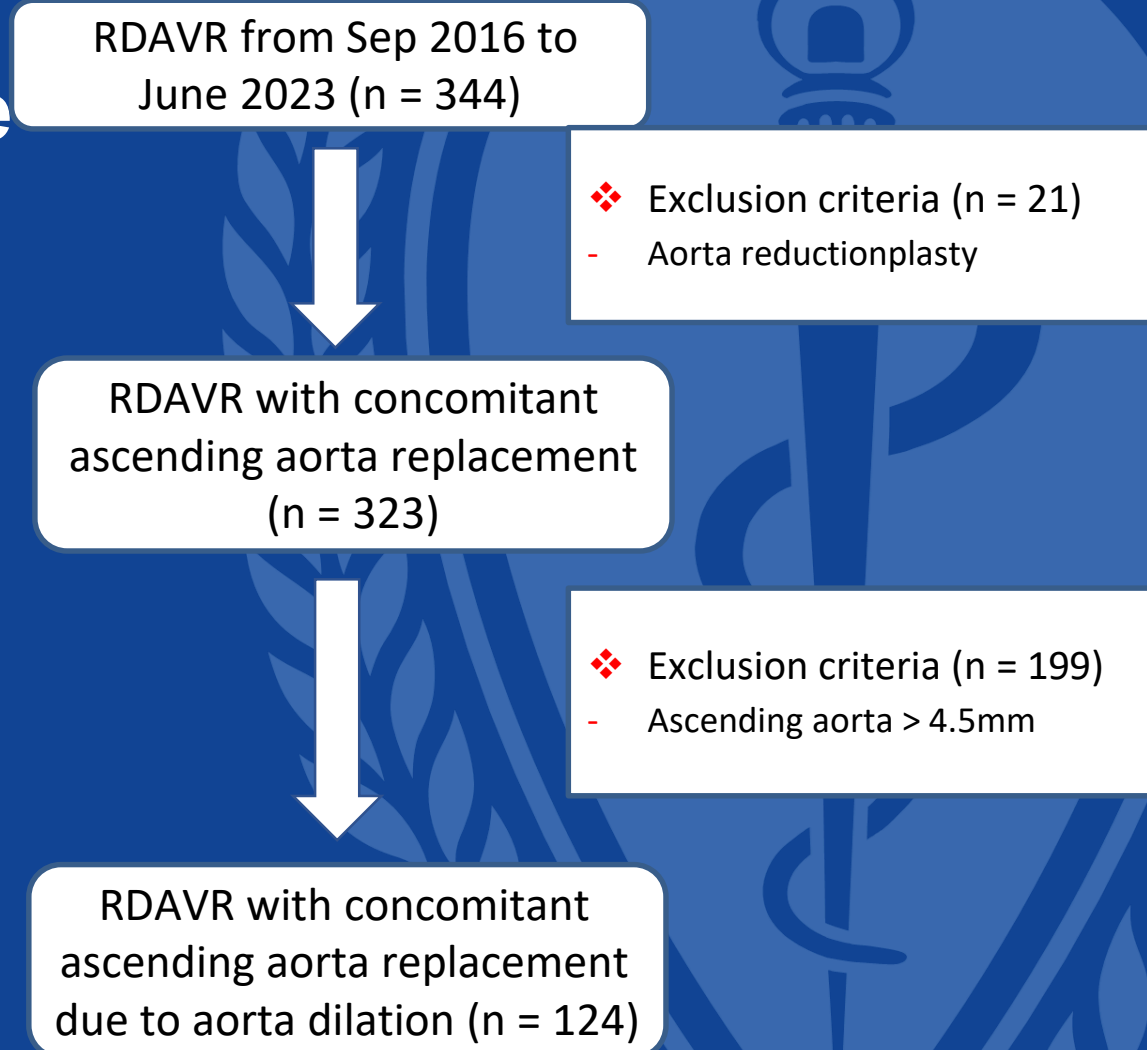
**Yoonjin Kang, Ji Seong Kim, Jae Woong Choi, Kyung Hwan Kim\***  
**Department of Thoracic & Cardiovascular Disease, Seoul National  
University Hospital, Seoul, Korea**

# Introduction

- **The optimal diameter at which concomitant aorta replacement should be done in aortic dilation is not yet known.**
- **The purpose of this study was to evaluate the surgical outcomes of concomitant aorta replacement with rapid deployment aortic valve replacement (RDAVR) in borderline aortic dilation.**

# Methods

- From September 2016 to June 2023
- RDAVR with concomitant ascending aorta replacement due to aorta dilation (4.0-4.5cm; N=124)
- Median follow up duration :  $27.8 \pm 21.9$  mo



# Methods

- **Early outcomes including operative mortality and postoperative complication**
- **Cox proportional hazards analysis (Multivariate)**
- **Primary outcome**
  - Overall Survival
  - Aortic reintervention



# Results

Variables	N=124
Age (y)	66.7 ±8.2
Male (%)	72 (58.1%)
Overweight	47 (37.9%)
DM	28 (22.6%)
HTN	68 (54.8%)
Hx of stroke	8 (6.5%)
CAD	17 (13.7%)
CKD	13 (10.5%)
Afib	12 (9.7%)
COPD	9 (7.3%)
Dyslipidemia	68 (54.8%)
Ascending aorta (mm)	43.1 ± 4.0
Euroscore	3.3 ±3.7
Reoperation	4 (3.2%)

Variables	
RD Valve Size	
19mm	11 (8.9%)
21mm	38 (30.6%)
23mm	41 (33.1%)
25mm	19 (15.3%)
27mm	15 (12.1%)
Bicuspid AV	85 (68.5%)
CPB time (min)	175± 44
ACC time (min)	126 ± 34
Selective cerebral perfusion (min)	13.3 ±6.5

# Results

Variables	
<b>Op. mortality</b>	0 (0.0%)
<b>Complications</b>	
new onset AF	51 (41.1%)
LCOS	4 (3.2%)
Respiratory	11 (8.9%)
AKI	3 (2.4%)
Bleeding reop	4 (3.2%)
Stroke	5 (4.0%)
Mediastinitis	0 (0.0%)
IE	0 (0.0%)

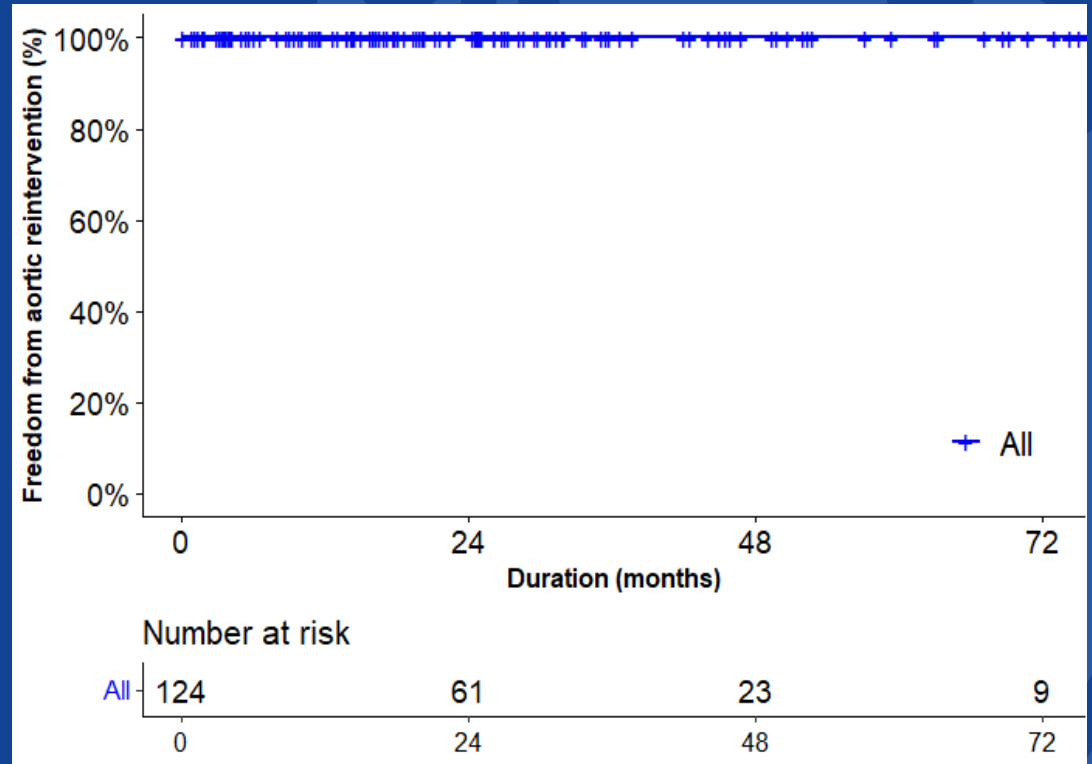
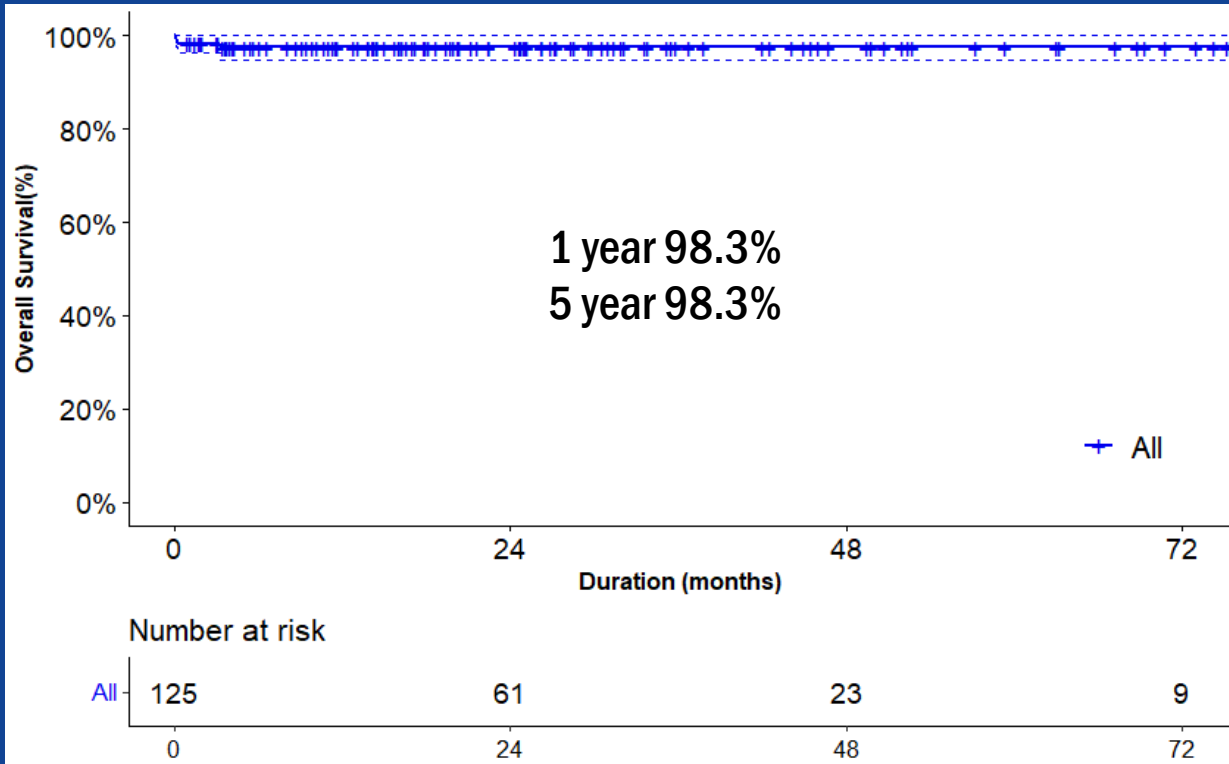
## Risk Factors Analysis for all cause mortality

Variables	HR	95% CI	P
COPD	24.020	2.177-265.000	0.009
EuroScore	1.154	1.067-1.247	<0.001

# Results

## Kaplan-meier curve for overall survival & aortic re-intervention

- There were no aortic re-intervention during follow up.





# Conclusion

- **Concomitant replacement of ascending aorta with RDAVR is a safe option in aorta dilation.**
- **Further studies to compare RDAVR vs RDAVR+ascending aorta replacement are required to validate the efficacy and safety of concomitant ascending aorta replacement in aortic dilation.**